

# THE ANNALS

AND

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XXI.—*On the Hymenoptera collected in New Caledonia by P. D. Montague in 1914.* By ROWLAND E. TURNER, F.Z.S., F.E.S.

THE small collection on which this paper is founded was made by the late P. D. Montague in New Caledonia in the year 1914. The types are in the British Museum. A few of the species show a relationship to the Queensland fauna, but absolutely no connection with New Zealand. Of the twenty-eight species noticed, three are undoubtedly recent importations; it is remarkable that none of these have so far been recorded from Australia. Only two other Hymenoptera were included in Mr. Montague's collection, both of them belonging to the Chalcididæ, each represented by a single specimen, one in poor condition, the other belonging to the genus *Podagrion*.

### Family Evaniidæ.

#### *Evania levipetiolata*, sp. n.

♂. Niger, rugose punctatus, sparse albopilosus; tibiis tarsisque anticis brunneis; alis sordide hyalinis, stigmatibus venisque fusco-ferrugineis; petiolo nitido.

Long. 4 mm.

♂. Face opaque, very finely and closely punctured and clothed with short white pubescence, with a strong longitudinal carina; cheeks a little shorter than the second joint of

the flagellum. Front and vertex closely and coarsely punctured; posterior ocelli twice as far from each other as from the eyes. Scape shorter than the combined length of the two basal joints of the flagellum; second joint of the flagellum equal to the third, twice as long as the first. Thorax and median segment coarsely rugosely punctured, without spots of white pubescence; parapsidal furrows distinct; the surface of the truncation and sides of the median segment coarsely reticulate; pronotum straight anteriorly, the angles not rounded. Metasternal processes parallel, small. Petiole twice as long as the distance separating it from the scutellum, entirely smooth and shining. Hind tibiae with very feeble spines on the outer margin, the longest calcar about half as long as the hind metatarsus.

*Hab.* Mt. Ignambi, 2200 ft., August 14.

The sculpture, except on the face and petiole, resembles that of *E. impressa*, Schlett., but the petiole is much longer and more slender than in the male of that species.

#### Family Braconidæ.

##### *Ipobracon novocaledonicus*, Szépl.

*Ipobracon novo-caledonicus*, Szépl. Ann. Mus. Nat. Hungar. iv. p. 564 (1906). ♀.

*Bracon Quodi*, Vachal, Revue d'Entomologie, xxvi. p. 121 (1907). ♀.

*Hab.* Pt. Ngea, January 14, 1914; 1 ♂, 2 ♀ ♀.

##### *Cyanopterus rutilans*, sp. n.

♀. Rufa; capite, antennis, valvulisque terebræ nigris, abdomine ferrugineo; pedibus flavis, coxis rufo-testaceis; alis anticis fuscis, fere ad medium flavis; stigmatе flavo; macula sub stigmatе flavo-hyalina; posticis fuscis, dimidio basali flavis.

Long. 9 mm.; terebræ long. 2.5 mm.

♀. Smooth and shining; antennæ nearly half as long again as the whole insect; front minutely punctured and clothed with sparse, short, fulvous hairs; palpi flavo-testaceous. Parapsidal furrows distinct, but very shallow. First tergite as broad at the apex as long; second tergite with an oblique depression on each side at the base, nearly twice as broad at the apex as long and a little more than half as broad again at the apex as at the base. Basal angles of the third tergite with small but distinct areas; second suture smooth, broadly but feebly arched in the middle; valvulæ stout, somewhat thickened at the apex. Stigma large, about half as broad as long; recurrent nervure received distinctly

before the apex of the first cubital cell; first abscissa of the radius short, about one-fifth of the length of the second, first abscissa of the cubitus straight.

*Hab.* Plaine des Lacs, February 26, 1914; 1 ♀.

Nearly allied to the Australian *C. rufus*, Szép., and *C. proficator*, Fabr., but has the terebra much shorter than in either. The hind legs are without black as in *C. crassicaudis*, Szép., but the terebra is much shorter than in that species.

*Bracon conspiciendus*, sp. n.

♀. Rufa; capite, antennis, terebræ valvulis, abdomineque, segmentis duobus basalibus exceptis, nigris; tergito secundo apice late nigro; pedibus flavo-testaceis; alis anticis fuscis, basi fere ad medium flavis; stigmato maculaque sub stigmate flavis; posticis flavis, tertio apicali fusco-hyalinis.

Long. 8 mm.; terebræ long. 2 mm.

♀. Smooth and shining; head transverse, slightly narrowed behind the eyes; front subopaque and very finely punctured on the sides, with sparse short black hairs, smooth in the middle. Antennæ as long as the whole insect, scape smooth and shining above, clothed with short sparse hairs beneath. Parapsidal furrows distinct, smooth. First tergite with a deep longitudinal groove on each side; second tergite strongly bisinuate at the base, twice as broad at the apex as at the base, about half as long again as the basal breadth, much longer than the third tergite; valvulæ stout and clothed with short black hairs; hypopygium acute, not reaching beyond the apical tergite. Stigma large, half as broad as long; cubitus sharply bent downwards a little beyond one-third from the base of the first cubital cell; recurrent nervure received just before the apex of the first cubital cell, almost interstitial; first abscissa of the radius about two-fifths of the length of the second, the third a little longer than the second. Tibiæ and tarsi clothed with short golden pubescence; hind calcaria short, about one-quarter of the length of the hind metatarsus.

*Hab.* Mt. Mou, March 12, 1914; 1 ♀.

This is nearly related to *Bracon walkeri*, Turn., from N. Australia, the colour of the wings and the neuriation being almost identical. But in *walkeri* the abdomen is wholly red, the terebra slightly shorter and the second tergite a little narrower at the base.

## Family Ichneumonidæ.

## Subfamily PIMPLINÆ.

## Genus NOTIOPIMPLA, Vachal.

*Notiopimpla*, Vachal, Revue d'Entomologie, xxvi. p. 118 (1907).

As Vachal has described four species of this genus and has not selected a type, I select *N. priocnemidea*, Vachal, as the type of the genus. This is a synonym of *Lissopimpla semipunctata*, Kirby; the generic name *Lissopimpla*, Kriechb., 1889, has priority over *Notiopimpla*. *L. semipunctata* is a common Australian insect. The three other species described by Vachal under the generic name *Notiopimpla* belong to the genus *Echthromorpha*, Holmg. *Notopimpla*, Krieg., is a different genus.

*Lissopimpla pacifica*, Morl.

*Lissopimpla pacifica*, Morl. Revision of Ichneumonidæ, ii. p. 35 (1913).  
♀.

*Hab.* Mt. Mou, March 12, 1914; 1 ♂.

*Echthromorpha quodi*, Vachal.

*Notiopimpla Quodi*, Vachal, Revue d'Entomologie, xxvi. p. 119 (1907).  
♀.

*Echthromorpha exquisita*, Morl. Revision of Ichneumonidæ, ii. p. 40 (1913). ♀ ♂.

*Hab.* Mt. Mou, March 14; 1 ♀. Kuakué, May 13, 1914; 1 ♂, 1 ♀.

Morley has overlooked Vachal's paper, hence the synonymy in this genus.

*Echthromorpha ceramocare*, Vachal.

*Notiopimpla ceramocare*, Vachal, Revue d'Entomologie, xxvi. p. 119 (1907). ♀.

*Echthromorpha bitecta*, Morl. Revision of Ichneumonidæ, ii. p. 39 (1913). ♂.

*Hab.* Mt. Mou, March 18; 1 ♀. Dumboa, January 29, 1914; 1 ♀.

*Echthromorpha platymischa*, Vachal.

*Notiopimpla platymischa*, Vachal, Revue d'Entomologie, xxvi. p. 120 (1907). ♀.

*Echthromorpha inermis*, Morl. Revision of Ichneumonidæ, ii. p. 46 (1913). ♂.

*Hab.* New Caledonia.

Not taken by Mr. Montague.

*Theronia simillima*, sp. n.

♀. Fulvo-testacea; antennis valvulisque terebræ nigris; scapo subtus testaceo; mandibulis flavis, apice nigris; alis nitidis, flavidescentibus, venis fuscis, stigmatate fulvo-testaceo.  
Long. 10 mm.; terebræ long. 3.5 mm.

♀. Mandibular teeth almost equal in length, the lower slightly the longer; temples and cheeks not buccate; clypeus transversely deflexed before the apex; antennæ 39-jointed. Carina of the mesosternum well defined; parapsidal furrows distinct, but very shallow; scutellum obliquely depressed anteriorly. Metapleural carinæ distinct and complete; median areola of the median segment not closed at the apex. First tergite distinctly less than twice as broad at the apex as at the base; terebra more than half as long as the abdomen. Hind tarsi not infuscate, the apical half of the tarsal ungues only black.

*Hab.* Ngoé, May 18; 1 ♀.

Very closely allied to *T. fumipennis*, Morl., from N. Queensland, differing in the yellower colour of the wings, in the colour of the hind tarsi, which are black in *fumipennis*, and in the distinctly slenderer first abdominal segment. The antennæ in the type of *fumipennis* have forty-one joints.

*Phytodietus austrocaledonicus*, sp. n.

? *Ophion austrocaledonicus*, Montr. Ann. Soc. Linn. Lyon, n. s. xi. p. 248 (1864).

♀. Nigra; facie macula rotunda, clypeo basi, tegulis, scutello in medio, postscutello macula mediana, scutello postscutelloque linea apicali, segmentoque mediano fascia transversa curvata utrinque postice pallide flavis; pedibus anticis intermediisque testaceis, coxis intermediis nigris; terebra ferruginea, valvulis nigris; alis subhyalinis, iridescentibus, venis nigris.  
Long. 9 mm.; terebræ long. 4 mm.

♀. Antennæ nearly as long as the whole insect, 39-jointed,

third joint nearly half as long again as the fourth. Eyes separated from the base of the mandibles by a distance equal to about one-quarter of the length of the third antennal joint. Head, thorax, and median segment opaque, the face very minutely and closely, the clypeus rather more strongly, punctured. Posterior ocelli a little further from each other than from the eyes; the head transverse, broader than the thorax. Parapsidal furrows distinct, but shallow; median segment not strongly convex, with an almost obsolete median sulcus, minutely punctured, broader than long. Abdomen shining, microscopically punctured, not petiolate; the first segment twice as broad at the apex as at the base, more than twice as long as its apical breadth, longer than the second segment. Tarsal ungues strongly pectinate. Areolet triangular, with a short petiole, receiving the second recurrent nervure at the apex; nervulus interstitial.

*Hab.* Mt. Mou, March 15; 1 ♀.

#### Subfamily OPHIONINÆ.

##### *Henicospilus montaguei*, sp. n.

♀. Testacea; antennis nigris, basi testaceis; alis hyalinis, iridescentibus, stigmatibus venisque nigris; cellula cubitali macula curvata brunnea.

Long. 16 mm.

♀. Very slender. Face very minutely and closely punctured; ocelli large. Antennæ measuring 17 mm. in length, the scape and four basal joints of the flagellum testaceous. Mesonotum subopaque, not punctured. Median segment smooth and shining at the base, the apical slope behind the transverse carinâ coarsely rugose. First abdominal segment long and slender, slightly swollen towards the apex; second about as long as the third and fourth combined, very slender, not compressed laterally, the apical half slightly swollen; the remaining segments strongly compressed laterally. Corneous spot in the cubital cell large at the base, narrow and curved strongly.

*Hab.* Mt. Mon, February 15; 1 ♀.

This somewhat resembles the Queensland species *H. turneri*, Morl., especially in the black stigma, but is without the second spot in the cubital cell, and the apical abdominal segments are not black as in that species.

Subfamily *CRYPTINÆ*.*Buodias unicolor*, sp. n.

♀. Nigra, pedibus palpisque rufo-testaceis; antennis 32-articulatis, articulo quinto apice, articulis 6-13 omnino, 14-15 supra albido-flavis; alis fuscis, venis nigris.

Long. 15 mm.; terebræ long. 4.5 mm.

♀. Third and fourth antennal joints long, about equal in length, the fifth distinctly shorter, the joints beyond the fifth diminishing rapidly in length. Clypeus and face closely punctured; front above the base of the antennæ smooth and shining, somewhat concave, with a low carina reaching to the anterior ocellus, ocellar region finely punctured, vertex smooth and opaque. Clypeus strongly depressed at the apex, the apical margin transverse. Eyes separated from the base of the mandibles by a distance equal to the length of the third joint of the fore tarsi. Pronotum rounded at the angles; mesonotum closely punctured-granulate, the parapsidal furrows deep; mesopleuræ and mesosternum closely punctured, the longitudinal groove between them well developed, mesosternum with a low transverse carina anteriorly; mesopleuræ anteriorly with a marginal carina. Scutellum smooth and shining, strongly convex, with a deep transverse depression at the base; postscutellum obliquely striated. Median segment broader than long, with a small smooth and shining rectangular enclosed area at the base; from each hind angle of the area runs an oblique carina not quite reaching the lateral margin of the segment, the portion of the segment before the carina irregularly punctured-rugulose; the portion behind the carina punctured-rugose, obliquely striated in the middle and also at the base of the posterior truncation; the spines at the hind angles of the dorsal plane stout and well developed; the apex of the dorsal plane is somewhat elevated in the middle and almost carinated in the middle of the apical margin. Abdomen shining; the first segment smooth, longer than the second, the basal half forming a petiole, the apical half rapidly broadened, half as broad at the apex as the second segment, the spiracles nearer to each other than to the apex of the segment; the remaining segments closely and minutely punctured; the second segment longer than broad; the abdomen about half as long again as the head and thorax combined. Areolet rectangular, much longer than high, receiving the second recurrent nervure close to the apex.

*Hab.* Mt. Canala, June 12; 1 ♀.

I doubt if the differences between *Buodias* and *Skeatia* are of generic importance.

### Family Thynnidæ.

#### *Eirone obtusidens*, sp. n.

♂. Niger; mandibulis, apice excepto, clypeo, scapo subtus, macula obliqua utrinque inter antennas, orbitis internis, orbitis externis latissime, pronoto margine antico, callis humeralibus, tegulis, mesonoti dimidio apicali linea longitudinali utrinque, scutello macula magna utrinque angulis basalibus, maculaque parva sub alis flavis; femoribus, tibiis tarsisque testaceis; scutello macula magna apicali, postscutello, segmento mediano, tergitisque secundo, tertio quartoque testaceo-ferrugineis; alis flavo-hyalinis, venis testaceis.

Long. 12 mm.

♂. Mandibles much broadened to the apex, the outer tooth acute, the inner tooth not well defined, represented by a broad oblique cutting-edge. Clypeus short and broad, scarcely at all convex, produced triangularly at the apex, sparsely punctured and sparsely clothed with long blackish hairs. Inter-antennal prominence bilobed, not strongly raised. Head transverse, shining and sparsely punctured. Antennæ shorter than the abdomen, third joint of the flagellum distinctly longer than the second, the four apical joints slightly arcuate beneath. Thorax and median segment shining, sparsely punctured, the punctures on the median segment very shallow; anterior margin of the pronotum distinctly raised and thickened. Abdomen narrow and elongate, segments 2-6 parallel-sided; very sparsely punctured, the segments scarcely constricted at the base, sternites finely aciculate and more closely punctured than the tergites, the sides of the segments sparsely clothed with black hairs. Seventh tergite long, subtruncate at the apex, rather deeply punctured; eighth sternite much longer than broad, narrowly subtruncate at the apex, with an apical fringe of short fulvous hairs, not projecting beyond the seventh tergite. Second and third abscissæ of the radius subequal, second recurrent nerve received just beyond one-third from the base of the third cubital cell.

*Hab.* Nonnea, January 23.

Not very near any Australian species of the genus, differing both in the form of the mandibles and of the clypeus. The apical joints of the maxillary palpi are not slender or elongate.



## Family Scoliidæ.

*Scolia* (*Dielis*) *novocaledonica*, nom. nov.*Elis formosa*, Sauss. Spec. Gen. *Scolia*, p. 208 (1861). ♂ (nec ♀, nec Guér.).

This male is described by Saussure as the male of *formosa*, Guér., but his determination of *formosa* was wrong, the name being applied by him to the common Australian species previously described by him as *tasmaniensis*. True *formosa*, Guér., was described from a female taken in New Ireland, and apparently always has the second recurrent nerve incomplete. Males taken with a female corresponding to Guérin's description in North Queensland differ widely from New Caledonia males, as also does the male of *tasmaniensis*, Sauss. The male of *novocaledonica* closely resembles that of *aurulenta*, Sm., a common Malayan species, but has the first abdominal segment shorter and less narrowed to the base and the seventh tergite and hypopygium narrower, the lateral spines of the latter being nearer to each other than in *aurulenta* ♂. A female from New Caledonia, doubtless the female of *novocaledonica*, closely resembles typical *aurulenta*, but differs in the form of the apex of the radial cell, which is much more oblique and more distant from the costa, produced a little further beyond the second transverse cubital nerve, and more narrowly rounded at the apex; the orange abdominal fasciæ are also much broader than in typical Philippine specimens, though specimens from Ceram have the fasciæ almost as broad. The long calcar of the hind tibia is twice as long as the shorter one, spathulate at the apex, and only a little shorter than the hind metatarsus in *novocaledonica*, whereas in *aurulenta* it is only about two-thirds of the length of the hind metatarsus and more acute at the apex. The puncturation of the scutellum and median segment is also distinctly sparser in *novocaledonica* than in *aurulenta*, especially in the middle. I have not seen Philippine specimens of ♂ *aurulenta*, but several of both sexes from Ceram and Amboina. In the male of *novocaledonica* the radial cell is more truncate at the apex than in *aurulenta*.

The male is the type.

*Hab.* Mt. Tong-houé, January 26; 6 ♂♂. Kuakué, May 14; 3 ♂♂. Paompai, September 15; 1 ♀.

*E. septemcincta*, Fabr., is the male of *E. radula*, Fabr., and not connected with the present species as Saussure thought possible.

## Family Psammocharidæ.

*Priocnemis caledonicus*, Vachal.

*Priocnemis caledonicus*, Vachal, Revue d'Entomologie, xxvi. p. 116 (1907). ♀ ♂.

*Hab.* Noumea, January 24; 2 ♀ ♀. Plaine des Lacs, February 12-20; 6 ♀ ♀.

Closely allied to Australian species of the group of *P. australis*, Guér.

## Family Sphegidaæ.

*Ampulex compressa*, Fabr.

*Hab.* Noumea, January and February; several specimens of both sexes.

This species, probably indigenous in S. India and Ceylon, and ranging as far as Hongkong, has been imported into E. Africa, St. Helena, and other localities, but not into Australia.

*Sceliphron hemipterum*, Fabr.

*Sphex hemiptera*, Fabr. Suppl. Entom. Syst. ii. p. 244 (1798).

*Sceliphron hemipterum*, Saussure, Grandidier, Hist. Madagascar, xx. p. 440 (1892). ♀ ♂.

*Sceliphron Quodi*, Vachal, Revue d'Entomologie, xxvi. p. 116 (1907). ♀.

*Hab.* Noumea, January 20-February 1, 1914; 3 ♀ ♀. Also from Madagascar, Mauritius, and the Seychelles.

Evidently an imported species.

*Chlorion (Proterosphex) fumipennis*, Sm.

*Sphex fumipennis*, Sm. Cat. Hym. B.M. iv. p. 249 (1856). ♀ ♂.

*Sphex antennata*, Sm. Cat. Hym. B.M. iv. p. 252 (1856). ♂.

*Hab.* Noumea, February 1, 1914; 3 ♀ ♀. Kuakué, May 13; 1 ♀. Plaine des Lacs, February 20; 1 ♂. New Caledonia, without other data; 3 ♂ ♂. Also from the whole of Australia (*fumipennis* typical), and from Aneiteum, New Hebrides (*antennata* type).

Kohl gives *fumipennis* as a variety of *luctuosus*, Sm., but the males show that they are specifically distinct. Vachal records *Sphex nitidiventris*, Sm. (= *S. refulgens*, Kohl), from New Caledonia, but this is almost certainly an error of identification. The colour of the wings is not quite as dark in the insular specimens as in the Australian form, but I can find no structural difference.

*Notogonia clypeata*, Sm.

*Larrada clypeata*, Sm. Ann. & Mag. Nat. Hist. (4) xii. p. 294 (1873).  
♀.

*Hab.* Noumea, January 20, 1914; 1 ♂. Also from Api, New Hebrides.

*Pison rechingeri*, Kohl.

*Pison rechingeri*, Kohl, Wien. Denkschr. Akad. Wiss. lxxx. p. 309 (1908).

*Hab.* Noumea, January 20-24, 1914; 2 ♀ ♀. Also from Samoa, Tonga, and Fiji.

This is probably the species identified by Vachal with doubt as *P. punctulatum*, Kohl.

## Family Eumenidæ.

*Eumenes germaini*, Lucas.

*Eumenes Germaini*, Lucas, Ann. Soc. Ent. France, (5) v., Bull. p. lxxvi (1875).

*Hab.* Noumea, January 20-24; 7 ♀ ♀.

*Odynerus caledonicus*, Sauss.

*Odynerus (Leionotus) Caledonicus*, Saussure, Etud. Fam. Vespidae, i. p. 205 (1852). ♂.

*Hab.* Noumea, January 17-23; 1 ♂, 4 ♀ ♀. Pt. Ndea, January 14; 1 ♀.

*Odynerus quodi*, Vachal.

*Odynerus Quodi*, Vachal, Revue d'Entomologie, xxvi. p. 115 (1907).

*Hab.* Noumea, January 24; 1 ♀.

## Family Vespidae.

*Icaria duchaussoyi*, Grib.

*Icaria Duchaussoyi*, Grib, Miscell. Ent. iv. p. 13 (1896).

*Hab.* Baie Ouemo, April 7; 7 ♀ ♀.

*Polistes macaensis*, Fabr.

*Vespa macaensis*, Fabr. Ent. ii. p. 259 (1793).

*Hab.* Baie Ngo, February 10-11; Noumea, January 16-22.

Doubtless an imported species. It also occurs throughout Southern Asia, in most of the islands in the Indian Ocean, also in Fiji, Tahiti, and Hawaii.

Family Apidæ.

*Nomia sicheli*, Vachal.

*Nomia sicheli*, Vachal, *Miscell. Ent.* v. p. 92 (1897).

*Hab.* Noumea, January 23; Baie Ngo, February 10; Baie Ouemo, March 28.

A good series taken.

*Megachile australis*, Lucas.

*Megachile australis*, Lucas, *Ann. Soc. Ent. France*, (5) vi. p. 303 (1876). ♀.

*Hab.* Noumea, January 23; 1 ♂. Mt. Canala, June 12; 1 ♀.

*Megachile albomarginata*, Sm.

*Megachile albomarginata*, Sm. *Descr. New Spec. Hymen.* p. 66 (1879). ♀.

*Hab.* Noumea, January 22–February 1; 2 ♀ ♀. Mt. Mon, March 12; 1 ♀. Baie Ouemo, March 28; 3 ♂ ♂, 7 ♀ ♀.

XXII.—*Descriptions and Records of Bees.*—LXXXV.

By T. D. A. COCKERELL, University of Colorado.

*Anthophora borneensis* (Cockerell).

Both sexes from Sandakan, Borneo (*Baker*). Described as a variety of *A. zonata*. *A. zonata*, var. *andrewsi*, Ckll., also comes from Sandakan (*Baker*).

*Crocisa insulicola*, sp. n.

♀.—Agrees with *C. amata*, Ckll., from Formosa, except as follows: black band across mesopleura narrower; anterior thoracic spots larger, separated by a space in middle no wider than the median stripe; axillæ with rather large blue spots; pygidial plate of abdomen narrower and shining at end, the median keel weak. (In